

ABSTRACT OF THE DISCLOSURE

A P-type pocket layer is formed in the surficial portion of a semiconductor substrate, a sidewall insulating film having a thickness of as thin as 10 nm or around is formed, and P is implanted therethrough to thereby form an N-type extension layer in the surficial portion of the p-type pocket layer. Then, a sidewall insulating film is formed, and P is implanted to thereby form an N-type source and a drain diffusion layer. P, having a larger coefficient of diffusion than that of conventionally-used As, used in the formation of the pocket layer can successfully moderate a strong electric field in the vicinity of the channel, and can consequently reduce leakage current between the drain and the semiconductor substrate and thereby reduce the off-leakage current, even if the gate length is reduced to 100 nm or shorter.